

S/180/60/000/005/027/033  
E193/E183

Study of the Kinetics of the Process of Cyanidation of Copper and Gold

Fig. 1 shows the rate of dissolution of copper ( $\text{g mol/cm}^2 \text{ sec}$ ) plotted against cyanide concentration ( $\text{g mol/litre}$ ).

Fig. 6 shows the rate of dissolution of gold against cyanide concentration - curves 1 and 3 at an oxygen pressure of 0.21 atm., and curves 2 and 4 at 1 atm. The rate of dissolution also depended on temperature as shown by Fig. 6. Curves 1 and 2 are from experiments at  $25^\circ\text{C}$  and curves 3 and 4 from experiments at  $35^\circ\text{C}$ . When the process of dissolution was controlled by diffusion, the rate of dissolution of the noble metals could be decreased by the formation of simple cyanides of the metals on the surface.

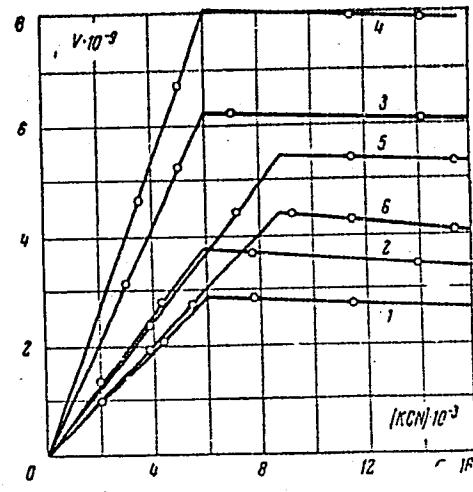
Fig. 3 shows the rate of dissolution of gold plotted against cyanide concentration for different rates of revolution of the disc. Curves 1, 2, 3, 4, 5 and 6 correspond to 0, 0.5, 1.67, 2.5, 6.1 and 18.3 revolutions/second respectively. At rates higher than 2.5 revolutions/second the process changes from a diffusion to a kinetic one.

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Study of the Kinetics of the Process of Cyanidation of Copper and Gold

Fig. 3



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Фиг. 3.

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E193/E183

Study of the Kinetics of the Process of Cyanidation of Copper  
and Gold

There are 7 figures, 4 tables and 21 references: 10 Soviet  
and 11 non-Soviet.

SUBMITTED: February 11, 1960

Card 5/5

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TYURIN, N.G.; KAKOVSKIY, I.A.

Behavior of gold and silver in the oxidation zone of sulfide deposits.  
Izv.vys.ucheb.zav.; tsvet.met. 3 no.2:6-13 '60. (MIRA 15:4)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii  
blagorodnykh metallov.  
(Mining geology) (Precious metals)

KAKOVSKIY, I.A.; GREBNEV, A.N.

Characteristic trait observed in the mineral depressing process.  
Izv.vys.ucheb.zav.; tsvet.met. 3 no.2&37-39 '60. (MIRA 15:4)

I. Ural'skiy politekhnicheskiy institut, kafedra metallurgii  
blagorodnykh metallov.  
(Flotation—Equipment and supplies)

SOKOLOVA, V.I.; KAKOVSKIY, I.A.

Simultaneous action of amines and fatty acids in the flotation of titanium-bearing minerals. Izv. vys. ucheb. zav.; tavet. met. 3 no.4: 23-27 '60. (MIRA 13:9)

1. Ural'skiy politekhnicheskiy institut. Kafedra metallurgii blagorodnykh metallov.  
(Flotation--Equipment and supplies) (Amines)  
(Fatty acids)

REVNIVTSEV, V.I.; KAKOVSKIY, I.A.; NIKITIN, Yu.I.

Determining the content of fine class products of a hydrocyclone  
by its content of solids. Obog. rud 5 no.1:17-21 '60. (MIRA 14:8)

1. Ural'skiy nauchno-issledovatel'skiy institut mekhanicheskoy  
obrabotki poleznykh iskopayemykh.  
(Ore dressing)

KAKOVSKII, I.A.

Solubility of thiols in water. Zhur. VKhO 5 no. 5:598-600  
'60. (MIRA 13:12)

1. Ural'skiy politekhnicheskiy institut.  
(Thiols)

KAKOVSKIY, I. A., prof.; REVNIVTSEV, V. I., kand. tekhn. nauk;  
ILYACHIN, V. V., inzh.

Regularities in dressing argillaceous-arenaceous pulp in a  
hydro-cyclone. Izv. vys. ucheb. zav.; gor. zhur. no.10:159-168  
'61. (MIRA 15:10)

I. Ural'skiy politekhnicheskiy institut imeni S. M. Kirova  
(for Kakovskiy). Rekomendovana kafedroy metallurgii blagorod-  
nykh metallov Ural'skogo politekhnicheskogo instituta.

(Separators(Machines)) (Sand) (Clay)

KAKOVSKIY, I.A.; SOKOLOVA, V.I.

Collectors on the basis of sulfoesterified commercial fatty acids. Izv. vys. ucheb. zav.; tsvet. met., no. 5: 50-58 '61.

(MIRA 14:10)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii blagorodnykh metallov.

(Flotation—Equipment and supplies)

KAKOVSKIY, I.A.; BABAK, V.K.; MOLCHANIKOVA, F.E.

Effect of mineral additions on the oxidation process of sulfide  
ions in aqueous solutions of sodium sulfide. Obog. rud 6 no.5:  
23-27 '61. (MIFI 15:1)

1. Ural'skiy nauchno-issledovatel'skiy institut mekhanicheskoy  
obrabotki poleznykh iskopayemykh.  
(Flotation) (Sulfides)

KAKOVSKIY, L.A.

High-speed flotation. TSvet. met. 34 no.5:11-17 My '61.  
(MIRA 14:5)

1. Ural'skiy politekhnicheskiy institut.  
(Flotation)

KAKOVSKIY, I.A.; GREBNEV, A.N.; SILINA, Ye.I.

Connection between the floatability of mineral particles of  
various sizes, their structure and the consumption of collectors.  
TSvet. met. 34 no.8:7-17 Ag '61. (MIRA 14:9)  
(Flotation--Equipment and supplies)

KAKOVSKIY, I.A. (Sverdlovsk); POTASHNIKOV, Yu.M. (Sverdlovsk)

Investigating the kinetics of the dissolution of silver sulfide  
in potassium cyanide solutions. Izv. AN SSSR. Otd. tekhn. nauk. Met.  
i topl. no.3:41-50 My-Je '62. (MIRA 15:6)

1. Ural'skiy politekhnicheskiy institut.  
(Silver sulfide) (Potassium cyanide) (Solubility)

TYURIN, N.G.; KAKOVSKIY, I.A.

Special features in the migration of certain metals in the earth's crust. Izv.vys.ucheb.zav.; tsvet.met. 5 no.1:7-14 '62.  
(MIRA 15:2)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii  
blagorodnykh metallov.  
(Mineralogy)

KAKOVSKIY, I.A.; TYURIN, N.G.

Gold behavior in polysulfide solutions at high temperatures and  
pressures. Izv. vys. ucheb. zav.; tsvet. met. 5 no.2:104-111  
'62. (MIRA 15:3)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii  
blagorodnykh metallov.  
(Sulfides--Metallurgy) (Gold)

KLYACHIN, V.V., inzh.; REVNIVTSEV, V.I., kand.tekhn.nauk; KAKOVSKIY, I.A., prof.

Efficiency of dressing a sand-clay pulp in a hydraulic cyclone.  
Izv. vys. ucheb. zav.; gor. zhur. 5 no.3:159-166 '62. (MIRA 15:7)

1. Ural'skiy politekhnicheskiy institut imeni Kirova. Rekomendovana kafedroy metallurgii blagorodnykh metallov Ural'skogo politekhnicheskogo instituta.

(Separators (Machines))

POTASHNIKOV, Yu.M.; KAKOVSKIY, I.A.

Mechanism of the dissolution of the higher copper sulfide in  
cyanide solutions. Izv. vys. ucheb. zav., tsvet. met., 5 no.6:  
62-65 '62. (MIRA 16:6)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii  
blagorodnykh metallov.  
(Copper sulfide) (Cyanides)

KAKOVSKIY, I.A.; VERSHININ, Ye.A.; GREBNEV, A.N.

Some sulfhydryl compounds of trivalent iron. Dok. AN SSSR 143 no.3:  
649-652 Mr '62. (MIRA 15:3)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova. Predstavлено  
академиком P.A.Rebinderom.  
(Iron compounds)(Thiols)

POTASHNIKOV, Yu.M.; KAKOVSKIY, I.A.

Particular features of a Cu<sub>2</sub>S solution in the presence of oxygen.  
Dokl.AN SSSR 145 no.6:1311-1313 Ag '62. (MIRA 15:8)

1. Ural'skiy politekhnicheskiy institut. Predstavлено akademikom  
A.N.Frumkinym.  
(Copper sulfide) (Cyanides)

KAKOVSKIY, Igor A.

"Study of the kinetics and mechanics of certain hydrometallurgical processes."

paper to be presented at the Sixth International Mineral Processing Congress, Cannes, France, 26 May - 2 Jun 63

KAKOVSKIY, I.A.; SILINA, Ye.I.; GREBNEV, A.N.

Field of using high activity flotation reagent-collectors. Report  
no.1. Izv.vys.ucheb.zav.; tsvet.met. 5 no.3:42-48 '62.

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii  
blagorodnykh i redkikh metallov.  
(MIRA 15:11)  
(Flotation--Equipment and supplies)

REVNIVTSEV, V.I., kand.tekhn.nauk; KLYACHIN, V.V., inzh.; KAKOVSKIY, I.A.  
prof.

Methodology of the technological design of a hydrocyclone for  
classifying arenaceous-argillaceous pulp. Izv.vys.ucheb.zav.; gor.  
zhur. 5 no.9:157-164 '62. (MIRA 15:11)

1. Ural'skoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo  
instituta mekhanicheskoy obrabotki poleznykh iskopayemykh (for  
Revnivtsev, Klyachin). 2. Ural'skiy politekhnicheskiy institut  
imeni S.M.Kirova (for Kakovskiy). Rekomendovana kafedroy  
metallurgii blagorodnykh metallov Ural'skogo politekhnicheskogo  
instituta.

(Separators (Machines))

YAKOVSKIY, I.A.(Sverdlovsk); POTASHNIKOV, Yu.M.(Sverdlovsk)

Investigating the process of dissolving the lower sulfide of copper  
in cyanide solutions. Izv. AN SSSR.Otd.tekh.nauk. Met. i topl. no.5:  
81-91 S-0 '62. (MIRA 15:10)

(Copper sulfide) (Cyanide process)

ARASHKEVICH, V.M.; KAKOVSKIY, I.A.

Flotation properties of xanthic disulfide. TSvet. met. 35 no.5:  
20-24 My '62. (MIRA 16:5)  
(Flotation--Equipment and supplies)

KAKOVSKIY, I.A.; GREBNEV, A.N.; SILINA, Ye.I.

Range of application of high activity flotation collector-reagents.  
Report no.2. Izv. vys. ucheb. zav.; tsvet. met. 5 no.4:33-45  
'62. (MIRA 16:5)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii  
blagorodnykh i redkikh metallov.  
(Flotation--Equipment and supplies)

KAKOVSKIY, Igor A.

"Study of the kinetics and the mechanism of certain hydrometallurgical processes."

report submitted for 6th Intl Mineral Processing Cong, Cannes, 26 May-2 Jun 63.

Prof, Polytechnic Inst of Ural Adviser to "Uralmekhanobr" Inst, Sverdlovsk.

TYURENKOVA, G.N.; KAKOVSKIY, I.A.

Naphthazolethiones as potential collectors for oxide and sulfide  
lead and copper minerals. Izv. vys. ucheb. zav.; tsvet. met. 6  
no.3:47-50 '63. (MINA 16:9)

1. Ural'skiy politicheskiy institut, kafedra metallurgii blago-  
rudnykh metallov.  
(Flotation—Equipment and supplies) (Lead ores)  
(Copper ores)

KAKOVSKIY, I.A., prof.; KLYACHIN, V.V., inzh.; REVNIVTSEV, V.I., kand.  
TSKhM. nauk

Examples of calculation of hydrocyclones for purposes of  
classifying sand and clay pulps. Izv. vys. ucheb. zav.; gor.  
zhur. 6 no.4:187-193 '63. (MIRA 16:7)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova (for  
Kakovskiy). 2. Ural'skiy nauchno-issledovatel'skiy institut  
mekhanicheskoy obrabotki poleznykh iskopayemykh (for Klyachin,  
Revnivtsev). Rekomendovana kafedroy metallurgii blagorodnykh  
metallov Ural'skogo politekhnicheskogo instituta.  
(Separators (Machines))

KAKOVSKIY, I.A.; ARASHKEVICH, V.M.

Mechanism of the interaction of xanthates with sulfide minerals.  
Tsvet. met. 36 no.6:10-18 Je '63. (MIRA 16:7)

(Flotation) (Sulfides)

KAKOVSKIZ, I.A.; POTASHNIKOV, Yu.M.

Kinetics of CuS dissolution in aqueous solutions of potassium cyanide.  
Dokl. AN SSSR 158 no. 3:714-717 S '64.  
(MIRA 17:10)

I. Ural'skiy politekhnicheskly institut im. S.M.Kirova. Predstavлено  
akademikom P.A.Rebindorom.

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8

KAKOVSKIY, I.A. (Sverdlovsk); SVETLOV, V.A. (Sverdlovsk)

Kinetics of cyaniding palladium alloys with silver. Izv. AN SSSR. Met.  
no.3850-58 My-Je '65. (MIRA 18:7)

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8"

KAKOVSKIY, I.A.; TYURENKOVA, G.N.

Physicochemical and flotation properties of displaced benzimidazolthiones. Izv. vys. ucheb. zav.; tsvet. met. 8 no.1: 21-27 '65.

(MIRA 18:6)

1. Ural'skiy politekhnicheskiy institut, kafedra metallurgii blagorodnykh metallov.

KULIGIN, S.A.; SHKLYAR, R.Sh.; KAKOVSKIY, I.A.

The structure of silver amalgams. Izv. vys. ucheb. zav.; tsvet.  
met. 8 no.5:59-60 '65. (MIRA 18:10)

1. Ural'skiy politekhnicheskiy institut i Ural'skiy neuchno-  
issledovatel'skiy i proyektnyy institut obogashcheniya i  
mekhanicheskoy obrabotki poleznykh iskopayemykh.

L 3556-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JI/JG  
ACCESSION NR: AP5024404

UR/0286/65/000/015/0002/0062

AUTHORS: Karasev, K. A.; Kakovskiy, I. A.

TITLE: A method for extracting platinum group metals and gold. Class 40,  
No. 173414

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 82

TOPIC TAGS: platinum, gold, chlorine, amalgamation

ABSTRACT: This Author Certificate presents a method for extracting platinum and gold from ores, concentrates, and products made by internal amalgamation in the presence of chlorine. To increase the yield of metals, the original materials are subjected to amalgamation at a concentration of chlorine ions on the order of 3 g·ion/l and at acidity of about 6.

ASSOCIATION: none

SUBMITTED: 03Feb64

ENCL: 00

SUB CODE: 00

NO REF SOV: 000  
Card 1/1 m/c

OTHER: 000

LEBEDEV, A.N.; KAKOVSKIY, I.A.

Studying the kinetics of gold dissolution in aqueous solutions of acetone cyanohydrin. TSvet.mat. 38 no.7:17-23. Sl. 165.

(MIRA 16:8)

YEPISKOPOSYAN, M.L., KAKOVSKII, I.A.

Studying the kinetics of copper and silver cementation by  
metallic iron from chloride solutions. Tezv. nauch. 36  
no. 10:15-19 0 1965.  
(MIRA 18:12)

KAKOVSKIY, I.A.; LEBEDEV, A.N.

Effect of surface-active substances on the rate of dissolution  
of gold in cyanide solutions. Dokl. AN SSSR 164 no.3; 614-617  
S '65.  
(MIRA 18:9)

1. Ural'skiy politekhnicheskiy institut im. S.M. Kirova.  
Submitted January 27, 1965.

KNYAZEV, Ye.A.; KAROVSKII, T.N.; KHOLMANENSKIY, Yu.B.

Interaction of germanium dioxide with aqueous solutions of acids and bases. Zhur. neorg. Khim. 10 no.12 p.2690-2706. D 1965.  
(KIRA 1965)

Ural'skiy nauchno-issledovatel'skiy i proyektnyy Institut  
mednoy promyshlennosti i Ural'skiy politekhnicheskiy Institut  
imeni Fizrova.

KAKOVSKIY, V. E.

USSR / General and Specialized Zoology - Insects

0-7

Abs Jour : Ref Zhur - Biol., No 6, March 1957, No 23201

Author : Kakovskiy, V.E., Rivkina, Kh.I., Kotkovskiy, A.P.

Inst : Not Given

Title : Peat Carbolineum.

Orig Pub : Tr. Mosk. torf. in-ta, 1955, No 3, 175-180

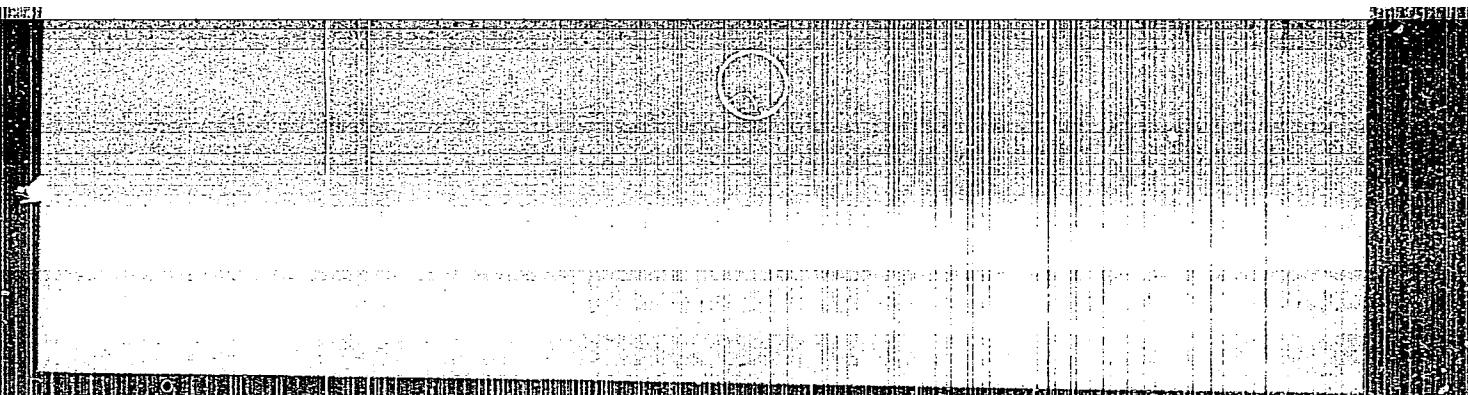
Abstract : Peat carbolineum is prepared on a base of distillation products of peat tar, which is a by-product of gas production (in gas-generating stations treating peat). Phenols, neutral peat oils, and especially pyridine bases are the toxic and antiseptic tar distillates. A sample of carbolineum, prepared from a base of peat acid oils, proved most effective in sprays against plant lice of all species and currant mite, and also in spraying soils against onion flies. Differing from coal tar, the peat carbolineum does not produce plant burns and does not contain multiple-ring aromatic hydrocarbons. It can be obtained in large quantities, since in distilling peat tars, 15-17% of acid peat oils of a high boiling point are produced.

Card : 1/1

✓ 571. *Chemical composition of the cabbage (Brassica oleracea). I.* J. M. Górecka, I. Raszka, and B. Lipiński (Wrocław). *Bull. Akad. Nauk Polskiej, Kl. Nauk Mat.-Fiz.,* 3, 327-34 (1965).  
The cabbage pigment, chlorophytin chloride, and chlorophytin acetate. The alk hydrolysis of the pigments gives a glucose salt which with  $\text{CH}_3\text{N}_2$  gives 1-Methyl-d-glucoside gluconate. Other  
compounds. Some simple glucosides are present and  
the presence of some organic acids is also mentioned.

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CIA-RDP86-00513R000620010004-8"

KAKOWSKA-LIPINSKA, Izabela; NAIMSKI, Krzysztof [deceased]; SIENKIEWICZ, Irena;  
ZAKZEWSKI, Kazimierz

Isolation of immune globulins from sera of hyperimmunized animals with  
the aid of zinc ion fractionation. Med.dosw.mikrob. 13 no.4:363-376  
'61.

l. z Centralnego Laboratorium Zjednoczenia Wytworni Surowic i  
Szczepionek "Biomed" w Warszawie.

(SERUM GLOBULINS chem)

KAKOWSKI, I.

"The character of the reciprocal action between disulfides and the surface of metals."

p. 499 (Revista Minelor) Vol. 8, no. 11, Nov. 1957  
Bucharest, Rumania

SO: Monthly Index of East European Accessions (EEAI) IC. Vol. 7, no. 4,  
April 1958

ACHERKAN, Naum Samoylovich, zasl. deyatel' nauki i tekhniki RSFSR,  
doktor tekhn. nauk, prof.; GAVRYUSHIN, A.A.; YERMAKOV, V.V.;  
IGNAT'YEV, N.V.; KAKOYLO, A.A.; KUDINOV, V.A.; KUDRYASHOV,  
A.A.; LISITSYN, N.M.; MIKHEYEV, Yu.Ye.; PUSH, ~~Yu.Ye.~~; TROFIMOV,  
O.N.; FEDOTENOK, A.A.; KHOMYAKOV, V.S.; ABANKIN, V.I., inzh.,  
retsenzent

[Metal-cutting machines in two volumes] Metallorezkuushchie  
stanki. [v dvukh tomakh]. Pod red. N.S.Acherkana. Moskva,  
Mashinostroenie. Vol.2. 2. perer. izd. 1965. 628 p.  
(MIRA 18:12)

ACHERKAN, N.S., doktor tekhn. nauk, prof., zasl. deyatel' nauki i tekhniki RSFSR; GAVKYUSHIN, A.A., kand. tekhn. nauk; YERMAKOV, V.V., kand. tekhn. nauk, dots.; IGNAT'YEV, N.V., kand. tekhn. nauk, dots.; KAKOYLO, A.A., inzh.; KUDINOV, V.A., kand. tekhn. nauk; KUDRYASHOV, A.A., kand. tekhn. nauk, dots.; LISITSYN, N.M., kand. tekhn. nauk, dots.; MIKHEYEV, Yu.Ye., dots.; PUSH, V.E., doktor tekhn. nauk, prof.; TRIFONOV, O.N., kand. tekhn. nauk, dots.; FEDOTENOK, A.A., doktor tekhn. nauk, prof.; KHOMYAKOV, V.S., kand. tekhn. nauk; ABANKIN, V.I., inzh., retsenzent

[Metal cutting machines] Metallorezhushchie stanki. Moskva, Mashinostroenie. Vol.1. 1965. 764 p. (MIRA 18:10)

PODOLINOV, I.I.; TRIGULEV, G.P.; KALINOV, V.P.; SHARY, N.I.

Study of the antigenic structure of human cells in cultures of strains "Immunologically purified" of the serum component of the medium. Folia biol. (Praha) 10 no.8:465-471 '62.

I. Institute of Experimental Biology, Academy of Medical Sciences of the U.S.S.R., Moscow.

PODOPLELOV, I.I.; GLINSKIY, I.A.; KAKPAKOV, V.T.; MINTYAN, S.P.

Studies on cell growth in monolayer cultures of the CaVe strain  
in a medium containing rabbit and bovine sera. Biul. eksp. biol.  
i med. 59 no.2:118-121 F '65. (MIRA 18:7)

1. Otdel immunobiologii (zav. - deystvitel'nyy chlen AMN SSSR  
N.N. Zhukov-Verezhnikov) i gruppa eksperimental'noy morfologii  
kletki (zav. S.S. Laguchev) Instituta eksperimental'noy bio-  
logii (dir. - prof. I.N. Mayskiy) AMN SSSR, Moskva.

KAKS, N.Ye.; FORNIYENKO, L.S.; FAKIR, M.

Electron paramagnetic resonance and spin-lattice relaxation of the  
 $Nd^{3+}$  ion in  $CaF_2$  single crystals. Fiz. tver. tela 6 no.2:549-553  
F '64. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo  
gosudarstvennogo universiteta.

KAKSTOV, A.A.

66405  
207/137-59-7-19865  
1970, Nr 7, pp 123 - 124 (USSR)  
Zvezda, V.M., Petkov, G.L., Svirzova, I.D., Solntseva, A.Z., Kakstov, A.A.  
Topolev Izh, Sm. I.  
Welding Cast Autogenetic LA3 Steel

PERIODICL:  
Tr. Sovtek, Mashinostro., z.s., 1973, Nr 4, pp 104 - 118  
AUSTENITIC: Cr-Mn LA3 steel is used in steam equipment production at up-to-date plants. Electrodes were developed and technology was developed. Requirements to materials used to rolled Cr-Mn-austenitic steel joints are the same as to steel for machine parts. Castings of wall joints are the same as operation. Oil was 500 - 6000 and 10,000 hours. The dilution of L105 kg/hour and by 1 kg/cm<sup>2</sup>. In the same metal are characteristic of LA3 steel welding. Cr, Ni, Mn sometimes P, further hot crack formation by the development of low-temperature. The presence of a second stage, the development of low-temperature removes the probability of hot crack formation in the ferrite layer. Eliminates the structure. Taking into account the dilution of the joint

Card 1/2

The base metal, the ferrite content in the build-up metal is considered to be 5 to 7%. Increased ferrite content arranged in continuous "chain" entails C-phases, Mn, Mo and V through the metal. The same metal was alloyed with C, Cr, Mn, Mo and V through the covering. The ferrite content was controlled by varying the Cr content. The following requirements to the chemical composition of build-up metal (with ER70S-5 electrodes) was established (in %): C 0.08 - 0.15; Si 0.01; Mn 2.0 - 4.0; Mo 1.08 - 2.17; V 0.35 - 0.50; S < 0.031; P < 0.03; for Cr and Mn electrodes values given within 9.0 - 13.5% and 17.7 - 21.3% Cr respectively. The electrode wire was made of "E6010" or "E6013" steel. Mechanical properties and performance of the build-up metal were satisfactory after welding for 10 hours at 800°C. From 1972 to 1976 the plant consumed 21 tons of ER70S electrodes for welding up casting castings in 50 - 600 kg steels, cast of "LA3" steel, and up to 12 tons for "Zvezda" steel.

V.B.

Card 2/2

FEDOTOV, L.Ye., kand.tekhn.nauk; KAKSTOV, A.A., inzh. [deceased]; TUMOFEYEV,  
B.T., inzh.

Welding concrete reinforcement metal in carbon dioxide. Svar.proizv.  
no.11826-28 N '64. (MIRA 18:1)

1. Leningradskiy filial Vsesovuznogo instituta po proektirovaniyu  
organizatsiy energeticheskogo stroitel'stva.

KAKTIN, S. G.

"The Occurrence of Spina Ventose in Monkeys"  
p. 189

in book publ. by Inst. Experimental Pathology and Therapy, Acad. Medical  
Sci. USSR Problems of Infectious Pathology in Monkey Experiments. Editor,  
B. A. Ipain (Cand. Medical Sci.) Sukhumi, 1958.

KAKTIN, S. G.

"Positive Allergic Reactions to Tuberculin in Monkeys" a report prepared at  
Sukhumi Medico-Biological Station, AMS USSR, 1954

So: Review of Eastern Medical Sciences, Munich, No. 2, 1956.

KAKTINA, D.

EGLITIS, V.; KAKTINA, D.

Phytophagous nematodes of the Latvian SSR. Trudy prob. i ten.  
soveshch. no.3:171-181 '54. (MIRA 8:5)

1. Institut pochvovedeniya i zemledeliya Akademii nauk Latviyskoy  
SSR.  
(Latvia—Nematoda) (Nematoda—Latvia)

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8

KATINA, D.

EGLITIS, V.K. [Eglitis, V.]; KAKTYNYA, Dz.K. [Kaktina, Dr.]

Heteroderids of the Latvian S.S.R. Trudy Gel'm. lab. 9:403-406  
(MIRA 13:3)

'59. (Latvia--Nematoda) (Agricultural pests)

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8"

KAKTYNYA, D.K. [Kaktina, D.]

Distribution of nematodes on one farm in the Latvian S.S.R.  
(MIRA 16:5)  
Vop. ekol. 7:73-74 '62.

1. Latviyskiy nauchno-issledovatel'skiy institut semledeliya,  
Skrivari.  
(Latvia--Nematoda)

KAKUCZKA, A., mgr inz.

Designating method of spatial schemes of ventilating mining excavations.  
Pt.1. Wiad gorn 14 no.4:118-120 Ap '63.

KAKUK, T.

KAKUK, T. Z Mobile hen houses. p 22

Vol. 11, no. 12, June 1956.

MAGYAR MEZAGAZDASAG

AGRICULTURE

Budapest, Hungary

SO: EAST EUROPEAN ACCESSIONS, VOL . 6, no. 3, March 1957

KAKUK, Tibor

HUNGARY/Diseases of Farm Animals. Noncontagious Diseases.

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54926.

Author : Kakuk, Tibor

Inst :  
Title : Rachitis, Perosis or the "Disease of Distorted Fingers".

Orig Pub: Magyar allatorv. lapja, 1957, No 3, 86-91.

Abstract: A survey. Despite the fact that rachitis and perosis in young birds are treated as different diseases, the author shows that their etiology and pathogenesis are similar in a number of cases. (See RZh 70829, 1531 [sic]).

Card : 1/1

7

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8

KAKULIA, T. A., MACHABELI, M. E.

"Manganosis in the clinic and experiment."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists  
and Infectionists, 1959.

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8"

S/068/62/000/012/001/001  
E071/E436

AUTHORS: Nechiporenko, N.N., Kakulin, G.P., Fedorchenko, I.G.,  
Manoylenko, B.R.

TITLE: An investigation of the process of chlorination of  
thiophene

PERIODICAL: Koks i khimiya, no.12, 1962, 43-45

TEXT: In view of the possibility of applying chlorine for the production of a high purity benzene, the authors investigated the process of chlorination of thiophene dissolved in benzene in order to establish the necessary amount of chlorine for a complete purification of benzole from thiophene. In addition, the influence of temperature and velocity of supply of chlorine to the reactor on the degree of purification of benzole with a given thiophene content was studied. The apparatus consisted of a reactor fitted with a mercury sealed stirrer, thermometer and inlet and outlet for chlorine. The outlet gases (air and traces of chlorine) were scrubbed in a solution of potassium iodide, crystalline sodium hydroxide (for HCl) and activated carbon (for benzene vapours). A cryoscopic benzene with an addition of 1% of thiophene was used.

Card 1/2

S/068/62/000/012/001/001  
An investigation of the process ... E071/E436

for experiments. The purification process was followed by the bromine number, determined by the bromide-bromate method. It was established that the degree of purification of benzole depends mainly on the amount of the reagent used and is practically independent of temperature (7 to 40°C) and rate of supply of chlorine. Refining with chlorine can produce a product practically free from thiophene. For a complete purification of benzole from thiophene, it is necessary to use 1.5 to 2.0 weight units of chlorine per 1 weight unit of thiophene. There are 1 figure and 3 tables.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut  
(Khar'kov Polytechnic Institute)

Card 2/2

FEDORCHENKO, I.G.; KAKULIN, G.P.; KONDRATENKO, Z.V.

Electric conductivity of concentrated phosphoric acids at  
100-200°C. Zhur.neorg.khim. 10 no.8:1945-1946 Ag '65.  
(MIRA 19:1)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina,  
kafedra obshchey i neorganicheskoy khimii. Submitted November 18,  
1964.

KANULIN, G.P.; FEDORCHENKO, I.G.

Electric conductivity of concentrated phosphoric acids.  
Zhur.neorg.khim. 7 no.11:2485-2486 N '62. (MIRA 15:12)  
(Phosphoric acid—Electric properties)

KAKULIN, G.P., inzh.; MUCHNIK, P.I., inzh.; NARTOVA, Ch.I., inzh.

Plastics for combination shaft linings in potash mines. Shakht.  
stroi. 8 no. 46-7 Ap'64 (MIRA 17-7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii  
i mekhanizatsii shakhtnogo stroitel'stva.

KAKULIYA, A.

Effect of grazing and hay cutting on the beardgrass steppe. Trudy  
Tbil.bot.inst. 21:127-134 '61.  
(Georgia--Pastures and meadows) (Beardgrass)  
(MIRA 14:10)

KAKULIYA, A. G., Candidate of Med Sci (diss) -- "The problem of treating patients with endarteritis obliterans at the Mendzhi spa, and an evaluation of certain diagnostic methods in this disease". Tbilisi, 1959, published by the Acad Sci Georgian SSR. 25 pp (Tbilisi State Med Inst), 200 copies (KL, No 21, 1959, 119)

KAKULIYA, G.A.

New nematode Parasitorhabditis ali n. sp. Kakulia from the  
pine bark beetle. Soob. AN Gruz. SSR 30 no.1:55-58 Ja '63.  
(MIRA 17:1)

l. Institut zoologii AN Gruzinskoy SSR, Tbilisi. Predstavлено  
академиком N.N. Ketskhoveli.

KAKULIYA, G.A.

A new species of nematodes of the bark beetle Pityocnes  
quadrigens Hart. Soob. AN Gruz. SSR 31 no. 2:433-438  
Ag '63. (MIRA 17:7)

1. Institut zoologii AN GruzSSR, Tbilisi. Predstavleno  
chlenom-korrespondentom AN GruzSSR L.P.Kalandadze.

KAKULIYA, G.A.; DEVDARIANI, TS.G.

New nematode species *Bursaphelenchus taratospicularis* Kakulia  
et Debdariani, sp. nov. (Nematoda: Aphelenchgoidea). Soob. AN  
Gruz. SSR 38 no.1:187-191 Ap '65.

(MIRA 18:12)

KURASHVILI, B. Ye.; KAKULIYA, G.A.; CHANISHVILI, Sh.Sh.

Study of the alimentary interrelationship between nematodes  
living under the elytra of the European spruce bark beetle and  
the bark beetle as a host. Soob. AN Gruz. SSR 33 no. 3:671-678  
Mr '64 (MIRA 17:8)

KAKULIYA, G.A.; LAZAREVSKAYA, S.L.

Ektaphelencus piniperdae nov. sp. (Tylenchida, Aphelenchoididae),  
a new nematode of Blastophagus piniperda. Trudy Gel'm. lab. 15:  
84-85 '65 (MIRA 19:1)

NATSVLISHVILI, G.A.; GABUNIYA, R.I.; KUVVINYA, L.A.

Importance of electrokymography in examining patients with  
cardiovascular diseases. Trudy inst. eksp. i klin. khir. i  
gemat. AN Gruz. SSR 11:15-20 '63. (MIRA 17:8)

CHANTURIYA, N.N.; KAKULIYA, M.A.

Biological control of *Armillaria mellea* Quel., the root rot causing agent in mulberry trees. Soob. AN Gruz. SSR 14 no. 4:239-246 '53. (MLRA 7:3)

1. Akademiya Nauk Grusinskoy SSR. Institut zashchity rasteniy, Tbilisi. (Mulberry--Diseases and pest) (Root rot) (*Armillaria mellea*--Biological control)

USSR/Plant Diseases - Diseases of Cultivated Plants! 0-3

Abs Jour : Ref Zhur s Biol., No 7, 1958, 30257

Author : Kakuliya, M.A.

Inst : Georgian Scientific Research Institute of Sericulture

Title : The Production Try-Out of Calcium Cyanamide for Mulberry Root Rot.

Orig Pub : Gruz. n.-i. in-ta shelkovodstva, 1956, 1, 43-46.

Abstract : No abstract.

Card 1/1

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8

KAKULIYA, M. Ye., Cand Biol. Sci -- (diss) "Study of the interaction of proteins with electrolytes and nonelectrolytes by electroconductivity methods." Tbilisi, Tbilisi Univ Publishing House, 1960. 15 pp with schematics; (Tbilisi State Univ im Stalin); 150 copies; free; (KL, 24-60, 130)

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8"

KAKULIYA, M. YE. (USSR)

"Study of Changes in the Physico-Chemical Properties of  
Deoxyribonucleic Acid in the Brain of Growing Animal  
Irradiated with X-Rays."

Report presented at the 5th International Biochemistry Congress,  
Moscow, 10-16 August 1961

MATSADZE, G.S.; KAKULIYA, M.Ye.\_

Effect of whole-body X irradiation on the concentration, composition,  
and structural viscosity of desoxyribonucleic acid in the brain of  
baby rabbits. Trudy Inst. fiziol. AN Gruz. SSR 12:193-198 '61.  
(MIRA 15:2)

(X RAYS...PHYSIOLOGICAL EFFECT)  
(DESOXYRIBONUCLEIC ACID) (BRAIN)

KAKUTIYA

Toxicity of metallic magnesium. E. M. Kuznetsov,  
P. F. Lysidez, and T. A. Kakalitsa. Gigriani 1960, 25,  
No. 11, p. 14 (1960). Mg dust produces chronic nephritis,  
nephritis, coldness of extremities with a painful  
tremor. The results indicate general absorption of Mg.  
blood level of the element reaching 5.1 mg. % (normal level  
is 2.3).

First Labor Hygiene & Occupational Diseases  
Academy of Medical Sciences of the USSR  
M. I. Mikhalchik, Main Doctor Dep. SSSR

Ka Kunin, A.M.

130-3-2/21

AUTHORS: Gromov, M. I., Tsylev, L.M., Kakunin, A.M., Kotov, V.I.  
and Kaporulin, V. N.

TITLE: Desulphurization of pig iron outside the blast furnace.  
(Vnedomennoye obesserivaniye chuguna).

PERIODICAL: Metallurg, 1958,<sup>3</sup> No.3, pp.3-6 (USSR).

ABSTRACT: The authors give diagrams (Fig.1) to show the various methods tried in the USSR and abroad for the external desulphurization of pig iron with soda, calcium carbide or other solid reagents. They suggest that their comparative neglect is due mainly to their relative inefficiency and low productivity. The French IRSID method they criticize on the additional grounds that it would be difficult to effect on a large scale, that special arrangements would be required for trapping the lime dust produced, that the finely divided reagent would be difficult to obtain and that nitrogen is not available at many works. They go on to describe a method developed at the Novo-Lipetskiy metallurgical works in which the liquid metal is treated with lime in a rotating vessel, coke being added to maintain a reducing atmosphere. B. Provotorov, A. Nikitin and L. Sidorin participated in this work. Experiments

Card 1/3

130-3-2/21  
Desulphurization of pig iron outside the blast furnace.

Showed that the desulphurization process is affected by the fluidity of the metal, the quantities of solids added per unit weight of metal, the sizing of the solids and the speed of rotation of the vessel. The internal diameter of the experimental vessels (Fig.2) was 1050 mm and the length of the cylindrical part 1240 mm; one end was conical. With chrome-magnesite lining no build-up of slag on the walls or chemical disruption of the lining occurred. With speeds of rotation of 2.5 and 4.4 m/sec the sulphur content of the metal fell from 0.085 to 0.03-0.012%. The authors give a nomogram for determining the optimal speeds of rotation in relation to the viscosity of the metal and the vessel diameter, and this shows that the optimal speed for the experimental conditions was 9-10 m/sec which would have given more rapid desulphurization. The method is recommended to other works, the following being given as optimal conditions: lime with a minimal content of silica and carbon dioxide, under 1 mm in particle size and added in a quantity of 1% by weight of the iron; coke of particle size 1-3 mm to be added in a quantity of 0.3-0.5% of the weight of the iron; the entrance of slag or runner sand

Card 2/3

107-58-7-6/43

AUTHOR: Kakunin, A.S., Deputy Minister of Communications of the USSR

TITLE: The Fortieth Anniversary of Lenin's Decree (40-let Leninskogo dekreta)

PERIODICAL: Radio, 1958, Nr 7, pp 9-10 (USSR)

ABSTRACT: After a short resumé of the development of radio communications in the Soviet Union since Lenin's radio centralization decree in 1918, the article lists the improvements and development that will be made in the sphere of radio and television equipment and communications in the period 1959-1965.

1. Radio--Development--USSR    2. Television--Development--USSR  
3. Propaganda--USSR

Card 1/1

ZAHESITEL' MINISTRA SVYAZI SSSR.  
(Radio)

AUTHOR:

Kakunin, A., Deputy Minister of Communications of the USSR

SOV/107-59-1-8/51

TITLE:

The Problems of Introducing Color Television (Problemy  
vnedreniya tsvetnogo televizora)

PERIODICAL: Radio, 1959, Nr 1, pp 10-12 (USSR)

ABSTRACT:

During the coming seven years, 100 TV centers and TV stations will be established in all capitals of Soviet republics and in larger industrial centers. The number of TV sets will be increased to 12.5 million. The TV laboratory at the Leningradskiy elektrotekhnicheskiy institut (the Leningrad Electro-Technical Institute) has been working since 1951 in the field of color television, under the leadership of Prof. P. V. Shmakov. At present four different systems of compatible color television are being discussed. All of them are adapted for both black-white and color TV sets and can be transmitted on all 12 channels. So far, no decision has been made as to which one of these systems will be generally adopted. The Leningradskiy vsesoyuznyy nauchno-issledovatel'skiy institut televizora (The Leningrad All-Union Scientific TV Research Institute) has set up a complex apparatus using one of the

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The Problems of Introducing Color Television of the USSR

SOV/107-59-1-8/51

four compatible systems, for the TV center in Moscow, where an experimental color TV station will start operating in 1959. This institute has also designed TV sets with tri-color kinescopes and 53-cm screens, the first few of which will be produced in 1959. There is one Soviet reference.

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6(4)

AUTHOR:

Kakunin, A.S., Deputy Minister of Communications,  
USSR

SOV/111-59-3-4/26

TITLE:

Our Country - The Homeland of Radio (Nasha strana -  
rodina radio)

PERIODICAL:

Vestnik svyazi, 1959, Nr 3, pp 3-4 (USSR)

ABSTRACT:

The article celebrates the 100th anniversary of the birth of A.S. Popov, "Russian scientist and the inventor of radio", born March 16, 1859. The first part includes a brief biographical sketch of Popov, his early work on electrical phenomena, and his research in the field of electromagnetic waves, leading to the first public demonstration of a radio receiver, May 7, 1895, followed, in 1901, by his success in achieving wireless communication over a distance of 150 km. The balance of the article is devoted to an outline of more recent developments in radio communication, especially from the point of view of its political exploitation as a medium of mass communication. In the Soviet Union at present

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Our Country - The Homeland of Radio

SOV/111-59-3-4/26

there are about 39 million radio reception points, of which about 9.5 million are receiving sets, 27 million closed circuit receiving points, and 2.5 million - television sets. Television has developed greatly of late; whereas in 1953 there were only 3 TV centers, there are now 55, and 7 high-power, and about 70 low-power relay stations. Experimental broadcasts of color TV will start this year, though it is noted parenthetically that a low-power experimental station of NII of the Ministry of Communications has been in operation since last year. Introduction of UHF FM broadcasting has been started, and the network of radio-relay lines is growing, including systems with as few as 1-3 channels, and as many as 600 telephone channels in one trunk. In the current 7 year period, radio-relay lines with distances of several hundred kilometers between repeater stations will be employed. Numerous contributions of radio and electronics to science, industry, and the economy are noted as well. Some specific goals,

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Our Country - The Homeland of Radio

SOV/111-59-3-4/26

outlined by the 21st Party Congress, are mentioned:  
8.4 fold increase in the extent of radio-relay  
lines; 2.6 increase in the number of TV stations;  
construction of about 100 new television centers,  
and powerful relay stations; including low-power  
relays, the overall number of transmitting TV sta-  
tions should reach 500. There is 1 photograph.

Card 3/3

KAKUEADZE, A., inzh.

Automatic device for the recognition of spoken command  
signals. Tekh.mol. 30 no.9:6-7 '62. (MIRA 15:9)  
(Automatic control)  
(Tiflis—Electronics—Research)

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8

KAKURIN, G.N., inzhener.

Restoring the babbitt lining of locomobile bearings. Mnergetik 2  
no.5:14 My '54.  
(Bearings (Machinery))  
(MLEA 7:6)

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620010004-8"

KAKURIN, Georgiy Nikolayevich, inzhener; TSMLISHCHEV, P.A., inzhener,  
redaktor; VENINA, G.P., tekhnicheskij redaktor

[Repair of locomotives at railroad electric power stations]  
Remont lokomobilei na zhelezodorozhnykh elektrostantsiakh.  
Moskva, Gos. transp. zhel-dor. izd-vo, 1955. 230 p. (MLRA 9:3)  
(Steam engines) (Traction engines)

Subject : USSR/Electricity AID P - 2956  
Card 1/1 Pub. 29 - 6/35  
Author : Kakurin, G. N., Eng.  
Title : Repair of the fire tube of a locomobile  
Periodical : Energetik, 2, 5, 11-12, My 1955  
Abstract : The author describes the procedure used in repairing fire tubes of the Erste-Brunner (Brno, Czechoslovakia) 395-hp locomotives. One drawing.  
Institution : None  
Submitted : No date

KAKURIN, L.I.

Phagocytic activity of neutrophils of aseptic peritoneal exudate  
in experimental acute radiation sickness. Med. rad. 4 no.5:7-11 My '59.  
(PHAGOCYTOSIS, eff. of radiations on  
x-rays, phagocytic activity of neutrophils of aseptic  
peritoneal exudate in exper. acute radiation sickness in  
rats (Rus))  
(ROENTGEN RAYS, eff.  
on phagocytosis, activity of neutrophils of aseptic peri-  
toneal exudate in exper. acute radiation sickness in rats  
(Rus))

ACCESSION NR: AT4042642

S/0000/63/000/000/0006/0008

AUTHOR: Akulinichev, I. T.; Bayevskiy, R. M.; Belay, V. Ye. Vasil'yev, P. V.; Gazeiko, O. G.; Kakurin, L. I.; Kotovskaya, A. R.; Maksimov, D. G.; Mikhaylovskiy, G. P.; Yazdovskiy, V. I.

TITLE: Results of physiological investigations aboard the "Vostok-3" and "Vostok-4" spaceships

SOURCE: Konferentsiya po aviationsionnoy i kosmicheskoy meditsine, 1963, Aviationsnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy\* konferentsii. Moscow, 1963, 6-8

TOPIC TAGS: biomedical monitoring, electrooculogram, pneumogram/Vostok-3, Vostok-4, EEG, EKG

ABSTRACT: A number of physiological indices were monitored during the tandem spaceflights of Nikolayev and Popovich (Vostok-3 and Vostok-4). New procedures used for the first time on these flights and improvements of existing equipment yielded a great deal of physiological information. Weightless-  
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ACCESSION NR: AT4042642

ness had no noticeable effect on the functional state of the CNS in either cosmonaut, as evaluated on the basis of performance of various tasks. EEG's showed a dominance of comparatively high-amplitude rhythms with a frequency of 5 to 7 cps, similar to those observed in athletes after intense physical exertion, during the first hours of weightlessness. Later a gradual shift toward beta-rhythms with a reduced mean amplitude of EEG biopotentials occurred. Heightened emotional stress in the first hours of flight and before reentry was reflected in decreased electrical resistance of the cortex. Functional stability of the higher involuntary nervous centers is indicated by the maintenance of normal daily variation of cortical resistance--higher at night, lower during the daytime--during the rest of the flights. EOG's (electrooculograms) were used as an index of the functional state of the vestibular apparatus. Asymmetries in oculomotor reaction, which could have indicated disturbances of the vestibular centers, were not observed in either cosmonaut. Vestibular tests not supplemented by EOG's also failed to yield any evidence of vestibular disturbance. Oculomotor activity was also used as an index of general and motor activity. Variations in oculomotor activity had a phase character. At the beginning of the flight Nikolayev, and to

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a lesser degree Popovich, showed an increase of oculomotor activity up to 4 to 6 eye movements per second. Eye movements of an uncoordinated character, of both large and small amplitude, were recorded. On the 6th and 7th orbits eye movement fell off, and later EOG's show periodic increases and decreases in oculomotor activity. Toward the end of the flight a second stable increase in oculomotor activity occurred, but its level was lower than at the beginning of the flight. Cardiac activity was monitored by EKG's (using chest leads). Increased pulse rates (from 98 to 112 for Nikolayev, and from 94 to 136 for Popovich) occurred immediately before launch, with corresponding shortening of the PQ and QT intervals. EKG changes during the powered-flight phase were similar to those observed in ground experiments with centrifuging. The maximum pulse rate during the first minute of flight was 136 for Nikolayev and 132 for Popovich. Normalization of pulse rates to the rates observed 4 hr before launch took place on Nikolayev's 6th and 7th orbit and on Popovich's 3rd to 4th orbit. Normalization of pulse to initial rates took 5 to 10 min during tests. No IKG changes indicating disturbances of automatism, excitability, or conductivity were observed. In flight Popovich registered 3 separate extra

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systoles; this had also occurred during training tests. The character of daily variation of cardiac activity remained unchanged. Pneumographic data revealed no respiratory irregularities. Some increase in respiration rate was noted during the powered-flight phase; this had also been observed during centrifuge tests. No pathological change in physiological functions of either cosmonaut was observed during flight. During the powered-flight phase, functional shifts similar to those observed during centrifuge tests occurred. Definite changes in the functional state of various physiological systems took place during the first hours of orbital flight, as indicated by the inhibition of pulse-rate normalization and the character of EEG and cortical resistance changes. Changes in the character of EEG's during prolonged (3 to 4 days) weightlessness indicate shifts in the interaction of excitation-inhibition processes in the higher levels of the CNS. However, the mental activity and neuro-regulatory functions of the cosmonauts remained at a high level.

ASSOCIATION: none

Card : 4/5

SUBMITTED 27 SEPT 63

ACCESSION NR: AT4042683

8/0000/63/000/000/0226/0229

AUTHOR: Kakurin, L. I.; Katkovskiy, V. S.; Kozlov, A.N.; Mukharlyamov, N. M.

TITLE: Effect of hypokinesia on work capacity in man

SOURCE: Konferentsiya po aviationskoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 226-229

TOPIC TAGS: hypokinesia, adynamia, work capacity, human energy expenditure, oxygen consumption

ABSTRACT: Experiments were performed to determine the effects of a prolonged limitation of motor activity on the physical work capability of man. Four healthy male adults, 21 to 24 years of age, were subjected to strict bed-rest for a period of twenty days. A strictly horizontal position was maintained even during meals. Physical work performed was measured at the beginning and after the completion of the experiment by having the subjects step up on a 25-cm step 100 times during a five-minute period. Oxygen consumption and certain other indices of respiratory functions were measured before, during, and after the bed-rest experiment.

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S/0000/63/000/000/0368/0371

ACCESSION NR: AT4042705

AUTHOR: Myasnikov, A. L.; Akhrem-Akhremovich, R. M.; Kakurin, L. I.; Pushkar', Yu. T.; Mukharlyamov, N. M.; Georgiyevskiy, V. S.; Tokarev, Yu. N.; Senkevich, Yu. A.; Katkovskiy, B. S.; Kalinina, A. N.; Cherepakhin, M. A.; Chichkin, V. A.; Filosofov, V. K.; Shamrov, P. G.

TITLE: Effect of prolonged hypokinesia on blood circulation in man

SOURCE: Konferentsiya po aviatcionnoy i kosmicheskoy meditsine, 1963. Aviationsnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 368-371

TOPIC TAGS: isolation, prolonged isolation, isolation chamber, isolation effect, bioelectric activity

ABSTRACT: Four young men 22 to 24 were subjected to voluntary bedrest for a period of 20 days. Tests on pulse, arterial pressure, rate of blood flow, venous pressure, etc., were run before and after the completion of the experiment. These tests were performed at rest and after functional exercises (30 knee bends at the rate of one every 1.5 sec). During the period of bedrest, pulse frequency diminished on the average by 14 strokes per minute; the arterial pressure diminish-

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ed by 11.2 mm of Hg. Stroke volume diminished on the average by 6 ml, while the minute rate of blood flow was reduced by 1.6 liters. After completion of the bed regime, pulse frequency rose by 18 to 34 strokes per minute, while systolic pressure and minute blood volume increased. Deep knee bends brought about characteristic increases in the pulse rate and changes in arterial pressure and phases of the cardiac cycle. The length of time required for these indices to return to normal increased from three minutes to seven minutes. It can be assumed that similar functional changes in the cardiovascular system will take place in man after his return to normal gravity following prolonged weightlessness.

ASSOCIATION: none

ENCL: 00

SUB CODE: 1S

SUBMITTED: 27Sep63

OTHER: 00

NO REF Sov: 000

Gord

2/2

ACCESSION NR: AT4042721

S/0000/63/000/000/0507/0510

AUTHOR: Yazdovskiy, V. I.; Bryanov, I. I.; Kakurin, L. I.; Krylov, Yu. V.; Cherepanikhin, N. A.

TITLE: Sensory-motor coordination in weightlessness

SOURCE: Konferentsiya po aviatcionnoy i kosmicheskoy meditsine, 1963.  
Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 507-510

TOPIC TAGS: weightlessness, motor coordination, spaceflight, sensory motor coordination, coordination testing, Vostok 3, Vostok 4

ABSTRACT: The effects of prolonged weightlessness on sensory-motor coordination were tested during the flights of Vostok III and Vostok IV, by Nikolayev and Popovich. Prior to the space flight, tests for sensory-motor coordination were worked out in laboratory conditions in a simulated Vostok-type cabin. The first test consisted of stretching out hands towards one of the instrument panels in the front part of the cabin. The cosmonaut would then memorize the position of his hands, close his eyes for 20 seconds, open them, and then evaluate the position

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